



## Navigating India's Digital Growth

*This editorial is based on "[Making Digital India safe, secure and inclusive](#)" which was published in The Hindu on 05/01/2025. The article brings into focus the Draft Digital Personal Data Protection Rules, 2025, highlighting key rights like informed consent and data erasure while emphasizing the need to address digital access and awareness for meaningful inclusion and security.*

**For Prelims:** [Draft Digital Personal Data Protection Rules, 2025](#), [Digital India](#), [BharatNet](#), [Open Network for Digital Commerce](#), [5G rollout](#), [Skill India Digital Hub](#), [India's Atma Nirbhar Bharat vision](#), [Start-Up India](#), [Jan Dhan accounts](#), [PM-Kisan Samman Nidhi](#), [Electronic waste](#), [Cyber Surakshit Bharat](#), [PMGDISHA](#), [Ayushman Bharat Digital Mission](#).

**For Mains:** Key Drivers of India's Digital Growth, Key Issues Associated with India's Digital Growth.

India's [Draft Digital Personal Data Protection Rules, 2025](#), represents a significant milestone in the country's digital governance. The framework introduces crucial rights like **informed consent, data erasure, and digital nominees**, making data protection accessible to every Indian through language inclusivity. The **digital-first philosophy**, exemplified by the **Data Protection Board**, promises efficient grievance resolution and compliance monitoring. The new framework, though promising, must grapple with **on-ground realities where millions still lack basic digital access and understanding**. As India positions itself as a digital pioneer, addressing these fundamental challenges becomes crucial for transforming policy promises into meaningful **digital inclusion and security for all citizens**.

### What is the Digital India Initiative?

- **About:** Launched on July 1, 2015, by the Indian Government, [Digital India](#) builds upon previous e-governance efforts from the mid-1990s. Unlike earlier attempts, it brings greater cohesion and interactivity to digital initiatives.
- **Objectives:**
  - **Bridging the Digital Divide:** The initiative aims to reduce the gap between digitally literate individuals and those with limited access to technology.
  - **Fostering Digital Inclusion:** It focuses on ensuring that all citizens, regardless of their background, can benefit from digital advancements in areas like education, healthcare, and government services.
  - **Driving Economic Growth:** By harnessing technological innovations, Digital India seeks to stimulate economic development throughout the country.
  - **Improving Quality of Life:** The program aims to improve the standard of living by applying technology to enhance various aspects of daily life.
- **Pillars:**



## What are the Key Drivers of India's Digital Growth?

- Expanding Digital Infrastructure:** India's growing digital infrastructure is bridging urban-rural connectivity and supporting a robust digital economy.
  - Programs like **BharatNet** aim to provide high-speed internet to rural areas, while **5G rollout** is accelerating digital adoption.
  - These developments are critical for enabling e-governance, e-commerce, and digital education in underserved regions.
  - India boasts an impressive internet user base exceeding 800 million, with 86% engaging in over-the-top (OTT) audio and video services, making it the primary use of technology in the country, as per the Internet in India Report 2023 by IAMAI and Kantar.
- Booming Digital Economy:** India's digital economy is rapidly expanding, driven by e-commerce, fintech, and IT services.
  - Platforms like **Open Network for Digital Commerce** are democratizing digital commerce for small businesses, while startups leverage technology to innovate.
  - This growth is transforming consumer habits and generating significant employment opportunities.
  - A recent report by Ask Capital says **India is set to become a USD 1 trillion digital economy by 2028.**
- Digital Skilling and Workforce Enablement:** India's focus on digital skilling is creating a workforce ready for emerging technologies.
  - Skill India Digital Hub** achieves a milestone with **over 1 crore registrations.**
  - The IT industry added **2.9 lakh new jobs** taking the industry's workforce tally to **5.4 million people in FY23.**
- Rising Smartphone Penetration:** Affordable smartphones and low-cost data have turned India into a mobile-first digital economy.
  - High **smartphone penetration enables greater access to online education, digital payments, and entertainment.**
  - Domestic manufacturing incentives are boosting production and exports,

supporting **India's Atma Nirbhar Bharat vision.**

- The Indian smartphone market shipped 69 million smartphones in the first half of 2024, with **7.2% growth year-on-year**

▪ **Start-Up Ecosystem and Innovation:** India's start-up ecosystem is driving digital innovation and economic growth.

- With support from government initiatives like **Start-Up India** and a strong funding landscape, tech startups are solving unique market challenges.
- Indian startups raised a total of **\$30.4 billion in funding throughout 2024** despite global economic uncertainties.

▪ **Digital Financial Inclusion:** India's focus on financial inclusion through **UPI and Jan Dhan accounts** is transforming access to banking and financial services.

- This has empowered millions, especially in rural areas, to engage with the digital economy. Initiatives like the **Digital Rupee pilot** reflect India's readiness for next-gen financial systems.
- The total number of **Jan Dhan accounts** have crossed 50 crore as in **August 2023**. Out of these accounts **56% accounts belong to women**
- UPI processed an impressive **Rs 23.49 lakh crores** across 16.58 billion financial transactions in October 2024

▪ **Tech-Driven Public Service Delivery:** Tech-enabled governance reforms like **Aadhaar and DBT** have made welfare delivery more efficient and transparent.

- Platforms like **CoWIN during Covid-19** showcased the scalability of digital solutions for national challenges.
  - This ensures that public services reach even the remotest parts of the country.
- **PM-Kisan Samman Nidhi** is one of the largest DBT schemes globally, directly transferring funds to farmers' **Aadhaar-linked bank accounts**

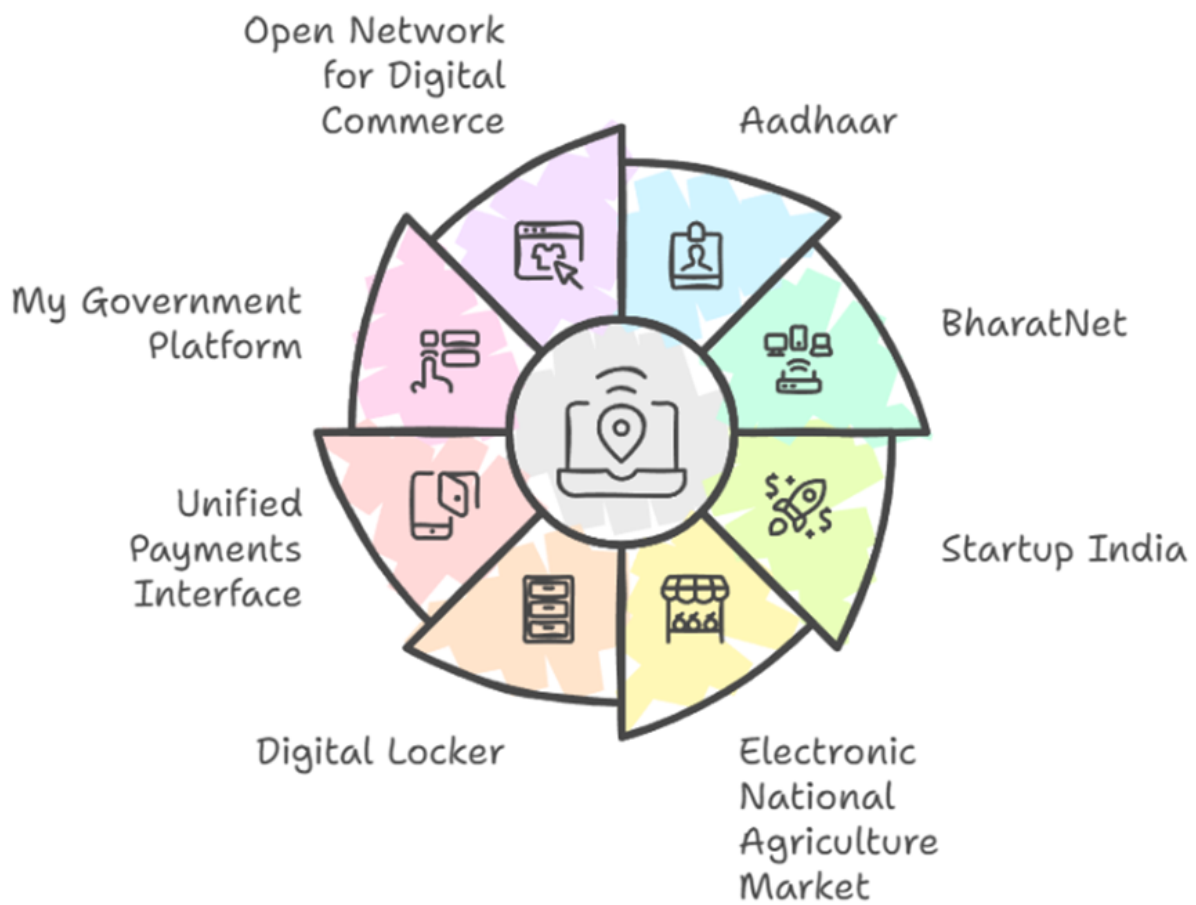
▪ **Digital Content and Entertainment Growth:** The rise of **OTT platforms, online gaming, and regional content** has revolutionized India's entertainment sector.

- Affordable data and smartphones have enabled access to content across urban and rural markets.
  - This sector is becoming a significant contributor to digital growth.
- **Millennials and Gen Z** are the main contributors for social media usage in India. **52.3 % of social media results come from millennials.**
- The Indian gaming industry clocked **\$3.1 billion in FY23** and is set to hit **\$7.5 billion by FY28**

▪ **Policy Support and Regulatory Frameworks:** Progressive policies like the **Digital Personal Data Protection Act, 2023**, ensure data privacy and trust in the digital ecosystem.

- These policies balance citizen protection with business growth, fostering innovation.
  - The **DPDP Act, 2023**, mandates **rights like data erasure and informed consent.**

## Key Digital India Initiatives



### What are the Key Issues Associated with India's Digital Growth?

- **Digital Divide:** India's digital growth is **uneven**, with significant gaps between **urban and rural areas**, and among **different socio-economic groups**.
  - While urban regions enjoy **robust internet connectivity and digital services**, rural areas struggle with **low penetration, digital literacy, and affordability issues**.
  - **As of 2023, rural internet penetration stood at only 37%**. Also, India's digital literacy rate stands at approximately **37%**, according to the **National Association of Software and Service Companies (NASSCOM)**.
- **Cybersecurity Threats:** India faces increasing cybersecurity challenges as **digital adoption rises**, including data breaches, phishing attacks, and ransomware incidents.
  - The lack of robust infrastructure to counter cyber crimes threatens the safety of individuals and businesses.
  - India witnessed **13.91 lakh cyber security incidents in 2022**. A recent **Data Security Council of India (DSCI) report** indicates the country faces a shortage of about **7,90,000 cyber security professionals**.
- **Data Privacy and Protection:** The absence of strong data protection frameworks until recently exposed citizens to risks like unauthorized data collection and misuse.
  - Even with the **Digital Personal Data Protection Act, 2023**, concerns remain about enforcement and potential misuse of provisions.
  - A recent survey by CII and Protiviti revealed that **61% of respondents believed Indian companies were engaging in activities like excessive data collection** and

secondary processing without consent, which violate the DPDP Act and raise concerns about user privacy.

- **Infrastructure Bottlenecks:** While India has made strides in [digital infrastructure](#), **challenges such as low broadband speed, patchy 5G rollout**, and insufficient fiber-optic networks hinder progress. Infrastructure gaps in remote areas limit access to digital services.
  - India ranks **25th** globally for mobile internet speeds as of **November 2024**, lagging behind countries like **South Korea**.
- **Regulatory and Policy Challenges:** Frequent regulatory changes and overlapping jurisdictions create confusion and compliance burdens for businesses.
  - For instance, the spectrum auction process has faced several delays due to complex regulatory procedures, **overlapping jurisdiction between the Department of Telecommunications (DoT) and other agencies**, and long negotiations regarding spectrum pricing.
    - This has hindered the timely rollout of 5G services in the country, affecting digital growth and technological advancements.
  - **Complex data localization requirements** add costs for global businesses operating in India.
- **Inefficiencies in Public Digital Systems:** Public digital platforms face challenges such as **low user adoption, data accuracy issues, and occasional technical glitches**.
  - Systems like CoWIN, while successful, highlight gaps in scalability and usability for non-urban populations.
  - **Aadhaar experienced several instances of identity fraud**, raising concerns about its robustness.
- **Environmental Impact of Digital Expansion:** India's rapid digital expansion has led to increasing **e-waste and energy consumption in data centers**, raising environmental sustainability concerns.
  - The **absence of robust e-waste management policies** exacerbates the problem.
  - India witnessed a **surge in [electronic waste \(e-waste\)](#) generation** over the past five years, rising from 1.01 million metric tonnes (MT) in 2019-20 to **1.751 million MT in 2023-24**.

## What Steps can be taken to Strengthen and Secure the Digital Landscape in India?

- **Bridging the Digital Divide:** India must expand its digital infrastructure to rural and remote areas while ensuring affordability and accessibility.
  - Programs like [BharatNet](#) can be complemented with **PM-WANI** to create a robust public Wi-Fi ecosystem, particularly in underserved regions.
  - Subsidizing **internet-enabled devices and promoting regional language content** can further increase digital participation.
- **Enhancing Cybersecurity Framework:** India needs a comprehensive cybersecurity strategy that includes capacity building, real-time threat detection systems, and stringent regulations.
  - Expanding the [Cyber Surakshit Bharat](#) initiative to **SMEs and startups** can ensure wider adoption of security best practices.
  - Targeted training programs under the **Skill India Mission** can address the **3.5 million cybersecurity professional gap**.
  - Encouraging **R&D in indigenous cybersecurity solutions** through PLI schemes can boost digital resilience.
- **Strengthening Data Privacy and Protection:** Effective implementation of the **Digital Personal Data Protection Act, 2023** is crucial for safeguarding citizen data.
  - Setting up regional **Data Protection Offices** can ensure accountability at the local level while reducing response times for grievances.
  - India should also **create clear guidelines on data localization to balance privacy, security, and international trade considerations**.
    - Regional Data Protection Offices can function as digital-first entities, as seen with the **CoWIN platform's decentralized management**.
- **Promoting Digital Literacy:** Digital literacy programs should extend beyond basic usage to include cybersecurity awareness, online etiquette, and skill enhancement.
  - Linking [PMGDISHA](#) with **Skill India Mission** can create holistic training for rural

- populations and youth.
- **Community-driven initiatives**, such as digital ambassadors or local champions, can ensure sustained participation.
  - **E-Waste Management and Sustainability:** India needs a national e-waste management framework focusing on collection, recycling, and upcycling.
    - Linking [Swachh Bharat Mission](#) with **e-waste collection initiatives** can create awareness and streamline processes.
    - **Incentivizing startups specializing in green technology** and recycling can also reduce environmental impact.
    - Extending the **PLI scheme** to green tech industries can boost eco-friendly manufacturing.
  - **Integrating Digital Public Goods:** India must leverage digital public goods like **Aadhaar, UPI, and DigiLocker** to enhance service delivery while addressing system inefficiencies.
    - This **integration improves governance efficiency** and reduces bureaucratic delays.
    - Linking **DigiLocker** with [Ayushman Bharat Digital Mission](#) can streamline health record management.
  - **Boosting Startups and Innovation:** Simplified regulatory frameworks and targeted funding can nurture startups, especially in **Tier II and Tier III cities**.
    - Enhancing the **Start-Up India** initiative by linking it with [ONDC \(Open Network for Digital Commerce\)](#) can democratize digital access for MSMEs and boost entrepreneurship.
    - Dedicated **incubation centers focusing on AI, blockchain, and IoT** can drive next-gen innovation.
  - **Ensuring Inclusive Digital Access:** Policies should focus on making digital services accessible to people with **disabilities and marginalized communities**.
    - Mandating assistive technologies like screen readers for public platforms and promoting affordable internet plans for economically weaker sections can bridge gaps.
    - Integrating [Accessible India Campaign](#) with **Digital India initiatives ensures inclusivity**.
    - Promoting **AI enabled voice-based interfaces in regional languages** can improve accessibility.
  - **Aligning with Global Standards:** India should harmonize its digital regulations with global frameworks like the [European Union's General Data Protection Regulation \(GDPR\)](#) while maintaining its unique socio-economic context.
    - Creating **bilateral agreements for cross-border data flow** and intellectual property sharing can foster international collaboration.
    - India can initiate programs like **Indo-Pacific Digital Alliance** to shine as a leader in global digital governance.

## Conclusion:

India's Draft Digital Personal Data Protection Rules, 2025, mark a significant step towards a secure and inclusive digital future. While the country's digital landscape continues to grow rapidly, **addressing the digital divide, cybersecurity challenges, and data privacy concerns remains crucial**. A focused effort on enhancing **digital infrastructure, promoting digital literacy, and ensuring data protection** will be key in realizing the full potential of Digital India.

### **Drishti Mains Question:**

Discuss the role of digitization in transforming governance and public service delivery in India. Highlight the challenges faced in its implementation and suggest measures to overcome them

## UPSC Civil Services Examination Previous Year Question (PYQ)

### **Prelims**

**Q. Consider the following: (2022)**

1. Aarogya Setu
2. CoWIN
3. DigiLocker
4. DIKSHA

**Which of the above are built on top of open-source digital platforms?**

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

**Ans: (d)**

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**Mains**

**Q.** “The emergence of the Fourth Industrial Revolution (Digital Revolution) has initiated e-Governance as an integral part of government”. Discuss. **(2020)**

PDF Reference URL: <https://www.drishtiias.com/printpdf/navigating-india-s-digital-growth>

